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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,897	08/27/2001	Hiroshi Komori	KOMORI ET AL-2	4075

7590 04/10/2003

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EXAMINER

HODGES, MATTHEW P

ART UNIT

PAPER NUMBER

2879

DATE MAILED: 04/10/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,897

Applicant(s)

KOMORI ET AL.

Examiner

Matt P Hodges

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s) ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-13 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Steierman (US 4,065,697).

Regarding claims 1-13 and 16-18, Steierman discloses a CRT tube including the following substances in percent weight:

SiO ₂	45-70	Na ₂ O	3-10
Al ₂ O ₃	0-6	K ₂ O	5-15
MgO	0-3	ZrO ₂	0
CaO	0-8	TiO ₂	0
SrO	0-15	CeO ₂	0-1
BaO	0-20	Sb ₂ O ₃	0-1
ZnO	0	P ₂ O ₅	0

These ranges include all values and combinations possible with the numbers listed above.

Further Steierman specifies as little as 0% lead oxide in the disclosed tube. (Column 2 lines 32-47). Steierman does not however appear to specify the X-Ray absorption coefficient of 28.0^{-1} or more at 0.6\AA , however the x-ray absorption is a product of the tube composition, specifically the amounts of lead oxide, BaO, and SrO. In this case the compositions of the materials specified do fall within the ranges that would provide the X-Ray absorption coefficient as claimed. Therefore the tube as taught would have an X-Ray absorption coefficient of 28.0^{-1} or more at 0.6\AA .

Art Unit: 2879

Regarding claim 19, Steierman further discloses the use of colorants in some percentage of 0% or more.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steierman (US 4,065,697) in view of Yanagisawa et al. (US 6,251,811).

Regarding claim 15, Steierman discloses the tube as claimed but does not specify the use of TiO_2 in concentrations of 0.1-2.0% by weight. However Yanagisawa, in the same field of tube manufacture, discloses the use of TiO_2 in concentrations of 0.5% by weight in order to beneficially adjust the viscosity of the glass. (Column 6 lines 7-14). Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate TiO_2 in concentrations of 0.5% by weight as disclosed by Yanagisawa into the CRT tube taught by Steierman in order to beneficially adjust the viscosity of the glass.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Steierman (US 4,065,697) in view of Petersen et al. (US 4,804,885).

Regarding claim 14, Steierman discloses the tube as claimed but does not specify the use of ZrO_2 in concentrations of 0.1-2.5% by weight. However Petersen, in the same field of tube manufacture, discloses the use of ZrO_2 in concentrations of 0 – 14 % by weight in order to beneficially attenuate the x-ray radiation. (Column 4 lines 60-67). Thus, it would have been obvious at the time the invention was made to a person having ordinary skills in the art to incorporate ZrO_2 in concentrations of 0 – 14 % by weight as disclosed by Petersen into the CRT tube taught by Steierman in order to beneficially attenuate the x-ray radiation.

Art Unit: 2879

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Yoon et al. (US 6,448,707) discloses a CRT tube with BaO and SrO as primary x-ray attenuators.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matt P Hodges whose telephone number is (703) 305-4015. The examiner can normally be reached on 7:30 AM to 4:00 PM M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (703) 305-4794. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7382 for regular communications and (703) 308-7382 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

mph 
April 7, 2003


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